METHOD AND APPARATUS FOR COMPUTING A PATH IN A SYSTEM WITH NODAL AND LINK DIVERSE CONSTRAINTS

ABSTRACT

5

Methods and apparatus for defining an alternate circuit path within a network given nodal diverse or link diverse constraints are disclosed. According to one aspect of the present invention, a device for computing circuit paths between a first node and a second node within a network that has a plurality of elements includes a route generator

10   and a list mechanism. The route generator computes a primary circuit path between the first node and the second node such that the primary circuit path includes a first element. The list mechanism identifies the first element as being inaccessible to an alternate circuit path. Using the list mechanism, the route generator computes an alternate circuit path that does not include the first element identified by the list mechanism. In one

15   embodiment, the first element is a link. In another embodiment, the first element is a node.